



State of California—Health and Human Services Agency
California Department of Public Health

Northern California Drinking Water Field Operations Branch
Monterey District



RON CHAPMAN, MD, MPH
Director & State Health Officer

EDMUND G. BROWN JR.
Governor

April 8, 2014

Ms. Rachel Arias
Maintenance Supervisor
California State Parks – Big Basin
303 Big Trees Park Rd.
Felton, CA 95018

Attention Ms. Arias:

CITATION NO. 02-05-14C-008-4410301-041
CITATION FOR SURFACE WATER TREATMENT TECHNIQUE VIOLATION
CALIFORNIA STATE PARKS BIG BASIN – WATER SYSTEM NO. 4410301

Enclosed is a Citation issued to the California State Parks – Big Basin (CSP Big Basin) water system for failure to comply with requirements of 64652(a)(1) and (2), Chapter 15, Title 22, California Code of Regulations (CCR). Specifically, your water system failed to provide disinfection as part of the multibarrier treatment requirement, specifically a total of 99.9 percent (3 log) reduction of *Giardia lamblia* cysts through filtration and disinfection and a total of 99.99 percent (4 log) reduction of viruses through filtration and disinfection.

The Citation consists of four sections: Violation, Background, Directives, and Further Enforcement Actions. The Violation and Background sections describe the events leading up to the issuance of the Citation. The Directives section specifies required actions that must be implemented by the water system to return to compliance. The Further Enforcement Actions section describes penalties to be assessed for failure to comply with the Citation. No civil penalty is levied with the attached Citation.

Your water system will be billed at the Department's hourly rate for the time spent on issuing this Citation since this is an enforcement action for noncompliance with state regulations. The water system will receive a bill from our Fee Billing Unit in Sacramento. If you have any questions regarding this matter, please contact Jonathan Weininger of my staff at (831) 655-6932 or me at (831) 655-6934.

Sincerely,

Jan R. Sweigert, P.E.
District Engineer, Monterey District
DRINKING WATER FIELD OPERATIONS BRANCH

Enclosures

CERTIFIED MAIL NO.: 7008 1830 0004 5435 0554

cc (w/enclosures): Santa Cruz County Environmental Health Department

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC HEALTH

Date of Issuance: April 8, 2014

RE: California State Park – Big Basin
Water System No. 4410301

TO: Ms. Rachel Arias
CSP Big Basin
303 Big Trees Park Rd.
Felton, CA 95018

CITATION FOR NONCOMPLIANCE
DISINFECTION TREATMENT TECHNIQUE VIOLATION
MARCH 2014

Chapter 4, Article 9, Section 116650 of the California Health and Safety Code (H&S Code) authorizes the issuance of a Citation for failure to comply with this Chapter (California Safe Drinking Water Act) or any regulation, standard, permit, or order issued or adopted thereunder.



Violation

The California Department of Public Health, Drinking Water Field Operations Branch, (hereinafter "Department") hereby issues a Citation to the California State Park – Big Basin (hereinafter "CSP Big Basin") water system for the following violation:

The CSP Big Basin water system failed to provide disinfection as part of the multibarrier treatment requirement, specifically a total of 99.9 percent (3 log) reduction of *Giardia lamblia* cysts through filtration and disinfection and a total of 99.99 percent (4 log) reduction of viruses through filtration and disinfection pursuant to Sections 64652(a)(1) and (2), Chapter 15, Title 22, California Code of Regulations (CCR), for March 11, 2014.

This constitutes a violation of surface water treatment regulations, specifically a failure to provide 0.5 log *Giardia lamblia* cysts and 4 log virus inactivation with disinfection for the CSP Big Basin water system on March 11, 2014.

Background

CSP Big Basin water system is a community water system that serves water to a residential population of 29 and a transient population of about 3,000 through 170 service connections. CSP Big Basin is a campground and primarily serves camp sites, but the service area also includes several residences and State Park employee facilities. The water system has one permitted surface water source, Sempervirens Reservoir - Raw (Primary



1 Station Code: 4410301-001), which is treated at CSP Big Basin's onsite
2 Siemens Memcor L10V microfiltration surface water treatment plant. The
3 Siemens Memcor L10V surface water treatment plant is credited with a 4
4 log *Giardia lamblia* cyst, 0 log virus, and 4 log *cryptosporidium* removal
5 through filtration. For multibarrier protection, an additional 0.5-log *Giardia*
6 *lamblia* and 4 log virus inactivation must be met through disinfection.

7
8 CSP Big Basin has an online chlorine analyzer recording chlorine residual
9 data once every 15 minutes at the point of compliance for disinfection
10 contact time at the CSP Big Basin pump station. From around midnight
11 until 2:00 PM on March 11, 2014, the chlorine residual analyzer at the
12 pump station did not have a detectable chlorine residual value, which
13 triggered a plant shutdown. Following the plant shutdown, stored treated
14 surface water from the 50,000 gallon clearwell continued to be distributed
15 to the distribution system. For about 16 hours, CSP Big Basin relied solely
16 upon the clearwell to meet demand, which was supplying treated surface
17 water without a detectable chlorine residual to the distribution system. The
18 absence of a chlorine residual in the effluent from the clearwell means the
19 water in the clearwell could not meet inactivation requirements.

20
21 CSP Big Basin took distribution chlorine and HPC samples on March 11,
22 2014. All samples came back with an HPC count of <1, which satisfies
23 alternative compliance with Section 64654(b), Chapter 15, Title 22, CCR,
24 which requires a 0.2 mg/L chlorine residual at all parts of the distribution
25 system for a water system utilizing surface water. Alternative compliance
26 can be met if distribution samples with a chlorine residual less than 0.2

27



1 mg/L are sampled to contain less than 500 HPC in at least 95% of monthly
2 samples.

3
4 According to a March 14, 2014 email from CSP Big Basin's chief plant
5 operator, Bill Rea, the surface water treatment plant's chlorinator was on
6 the wrong power setting, which contributed to it not being able to supply a
7 detectable amount of chlorine. The chlorinator has since been fixed and is
8 able to supply an adequate amount of chlorine to the plant effluent to
9 achieve desired contact time credit.

10
11 Failure to provide 0.5 log *Giardia lamblia* and 4 log virus inactivation from
12 disinfection resulted in a violation of the surface water treatment rule for the
13 CSP Big Basin water system for the month of March 2014.

14
15 **Directives**

16
17 The CSP Big Basin water system is hereby directed to take the following actions:

- 18
19 1. Immediately cease and desist from failing to comply with Sections 64652 (a)
20 (1) and (2), Chapter 15, Title 22, CCR.
21
22 2. Provide the Department with an interim solution to prevent a chlorine contact
23 time failure until a permanent solution has identified. Please send the interim
24 plan to the Department by **April 23, 2014**.
25
26 3. Provide the Department with a permanent solution to prevent future chlorine
27 contact time failures. A permanent solution shall include physical and/or



operational changes that will prevent potentially non-chlorinated water from leaving the clearwell and entering the distribution system. Please submit a description of any physical changes and an updated surface water treatment plant operations plan which includes any operational changes to the Department by **June 10, 2014**.

4. Conduct public notification of the disinfection treatment technique violation in conformance with Section 64463.4, Chapter 15, Title 22, CCR. The notification shall be completed in accordance with the following:

- Mail or direct delivery of the Public Notification to each non-transient customer (employees and residents) served by the water system by **April 18, 2014**.
- By one of the following secondary methods to reach persons not likely to be reached by mail or direct delivery;
 - By publication in a local newspaper, by internet posting of the notice, by posting the public notice in conspicuous public places within the water system or delivery to community organizations. Notice by secondary method shall be conducted within thirty (30) days of receipt of this Citation. If the water system opts to issue the notice via internet website, the public notice shall remain posted for a minimum of seven (7) days. The CSP Big Basin water system must determine which option will be used to conduct the secondary distribution of the notice and notify the Department of their decision no later than **April 18, 2014**.



1
2 5. Submit the Public Notification required by Directive No. 2 of this Citation to
3 the Department for approval prior to distribution. A sample notice is
4 enclosed (Attachment A) that may be used to fulfill the notification
5 requirement. **The CSP Big Basin water system must edit the wording of**
6 **the sample notification as necessary.**

7
8 6. Proof of Notification must be provided to the Department by submitting
9 copies of the notice distributed to the customers with the completed Proof of
10 Notification form (Attachment B), to the Department **within ten (10) days**
11 **following issuance of the Public Notification.**

12
13 All responses to the directives contained in this Citation shall be submitted to:

14
15 Jan R. Sweigert, P.E.
16 District Engineer, Monterey District
17 California Department of Public Health
18 Drinking Water Field Operations Branch
19 1 Lower Ragsdale, Building 1, Suite 120
20 Monterey, CA 93940

21
22 **Further Enforcement Actions**

23 Division 104, Part 12, Chapter 4, (commencing with section 116270) of the
24 California Health and Safety Code authorizes the Department to: issue additional
25 citations with assessment of penalties if a public water system continues to fail to
26 correct a violation identified in a citation; take action to suspend or revoke a permit
27 that has been issued to a public water system if the system has violated applicable
law or regulations or has failed to comply with orders of the Department; and



petition the superior court to take various enforcement measures against a public water system that has failed to comply with orders of the Department. By issuance of this Citation, the Department does not waive any right to take additional or alternative enforcement action against the System including, but not limited to, assessment of penalties as authorized by law.

Failure to comply with any provision or directive of this Citation may result in the Department imposing penalties.

4/8/2014

Date

Jan R. Sweigert, P.E.

District Engineer, Monterey District

DRINKING WATER FIELD OPERATION BRANCH

CERTIFIED MAIL NO. 7008 1830 0004 5435 0554

